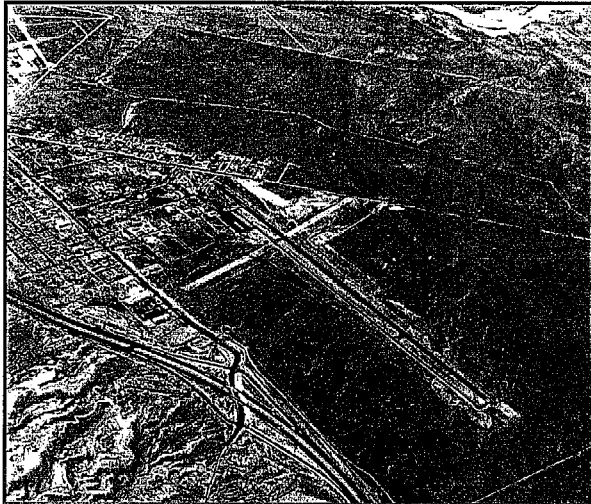




CHAPTER ONE INVENTORY

Chapter One

INVENTORY



The initial step in the preparation of the airport master plan update for the Holbrook Municipal Airport is the collection of information pertaining to the airport and the area the airport serves. This chapter assembles collected information which will be used in subsequent analyses in this study. Within this chapter is an inventory of existing airport facilities, area airspace, and air traffic control. Additionally, background information regarding the City of Holbrook and the regional area is collected. This includes information regarding the airport's role in regional, state, and national aviation systems, surface transportation, and the socioeconomic profile. This information was obtained through on-site inspections of the airport, interviews with City staff, airport tenants, and documents provided by the Federal Aviation Administration (FAA), Arizona Department of Transportation-



MUNICIPAL AIRPORT

Aeronautics Division (ADOT), and the City of Holbrook.

AIRPORT SETTING

Holbrook Municipal Airport is located on a 305-acre site in the northeast portion of the City of Holbrook, approximately 3 miles north of the central business district. As shown in Exhibit 1A, airport facilities can be accessed either by West Vista Road, or Airport Road from Navajo Boulevard (Old Route 66/Business Interstate 40). Both West Vista Road and Airport Road are situated on the east side of the airport and connect directly with the apron area. West Vista Road provides primary access to the public terminal building.

According to the 1979 *Holbrook Municipal Airport Master Plan*, the



airport was constructed approximately 60 years ago and has been a public use facility ever since. Prior to World War II, Holbrook Municipal Airport served as a training site for the Civilian Pilot Training Program of the U.S. Military and later became a military flight training site for a brief period of time.

A mix of commercial and light industrial land uses are prevalent along both sides of Navajo Boulevard. North of Navajo Boulevard to the airport boundary (generally between West Vista Road and Hutchinson Street) is a light industrial area. Located in this area are City of Holbrook Public Works offices, the City of Holbrook firefighting training facility, Fire Station Three, and Arizona Department of Transportation, Highway Maintenance and administrative offices.

Along the south side of Navajo Boulevard are a mixture of hotels, motels, and retail shops. Further south of Navajo Boulevard is primarily residential land use. Land use to the west and southwest of the airport are

primarily residential. Much of the area to the north and northeast is presently open space with some agricultural uses.

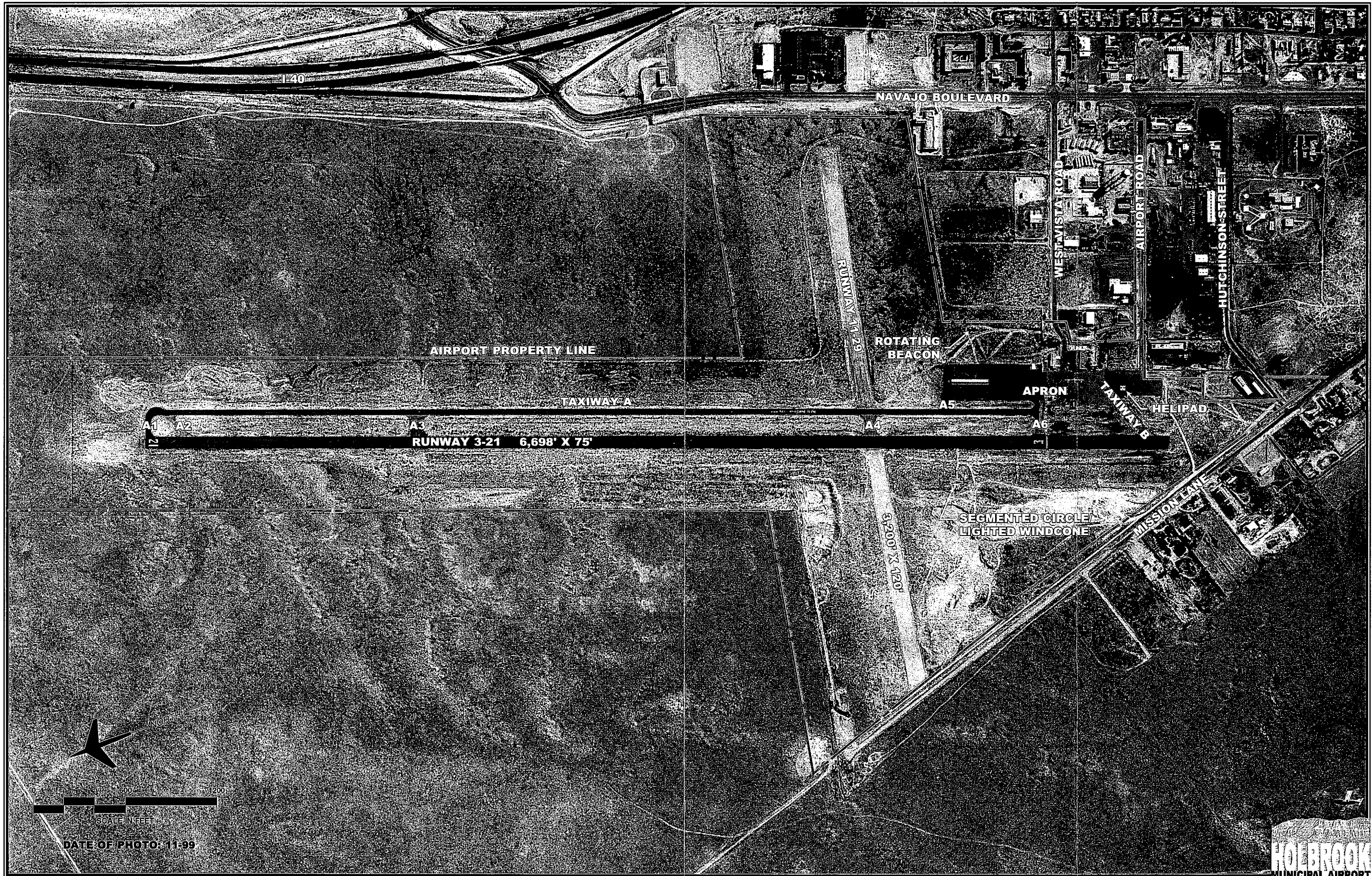
AIRPORT ADMINISTRATION

Holbrook Municipal Airport is owned and maintained by the City of Holbrook. The operation and maintenance of the airport is the responsibility of the Public Works Department. Administrative and financial oversight of the airport is the responsibility of the City of Holbrook City Council. The City contracts with Triple A Aviation to provide aircraft fueling, maintenance, rental, and flight training services at the airport.

DEVELOPMENT HISTORY

Since 1986, the airport has completed a number of improvement projects with both state and federal grant assistance. **Table 1A** summarizes the improvement projects completed at the airport since 1986 including current projects.

TABLE 1A Airport Improvement Projects (1986-1999)	
Fiscal Year	Improvement Projects
1986	Rehabilitated runway and taxiway.
1988	Completed Master Plan Update.
1989	Constructed taxiway, access road (West Vista), and installed VASI.
1992	Installed medium intensity taxiway lights (MITL)-phase I, reconstructed apron, constructed access road (West Vista Road).
1994	Installed medium intensity taxiway lights (MITL)-phase II, replaced beacon, constructed helipad, and completed pavement repair and maintenance.
1999	Update Master Plan and complete pavement repair and maintenance.
REIL-Runway End Identification Lights VASI-Visual Approach Slope Indicator MITL-Medium Intensity Taxiway Lights Sources: Arizona Department of Transportation, Aeronautics Division	



HOLBROOK
MUNICIPAL AIRPORT

AIR TRAFFIC ACTIVITY

At airports serving general aviation, the number of based aircraft and the total annual operations (takeoffs and landings) are the primary indicators of aeronautical activity. These indicators will be used in subsequent analysis in this Master Plan Update to project future aeronautical activity and determine future facility needs.

BASED AIRCRAFT

Table 1B summarizes historical based aircraft at Holbrook Municipal Airport from 1994 to 1998, as reported by the Arizona Department of Transportation, Aeronautics Division (ADOT) and the City of Holbrook. ADOT records represent aircraft registered with the state as being based at the airport. The 1998 total of 14 based aircraft represents an actual based aircraft count completed by the City of Holbrook and reported to ADOT. The N-number and aircraft type of these aircraft are summarized in **Appendix B** consistent with ADOT master plan checklist requirements.

As shown in **Table 1B**, based aircraft peaked in 1995 at 22, but have since declined annually to a 5-year low of 14 in 1998. The 1998 total of 14 based aircraft was comprised entirely of single-engine piston aircraft.

TABLE 1B
Historical Based Aircraft

Year	Based Aircraft
1994	19
1995	22
1996	17
1997	15
1998	14

Source: Arizona Department of Transportation, Aeronautics Division (1994-1997).
City of Holbrook (1998)

AIRCRAFT OPERATIONS

Without an operating airport traffic control tower, annual aircraft operations at Holbrook Municipal Airport have not regularly been counted. Instead, only estimates of historical and current activity is available. Prior to 1994, annual operations were estimated annually for the Federal Aviation Administration (FAA) and recorded on the FAA 5010-1 Master Record form. A review of these forms indicates that annual operational estimates have varied between a high of 11,650 in 1980 and 1981 to a low of 4,650 from 1990 to 1993.

Since 1994, Triple A Aviation has maintained a record of aircraft operations during normal business hours. As shown in **Table 1C**, total operations recorded by Triple A Aviation increased between 1994 and 1996 from 3,770 in 1994 to 4,518 in 1996. For 1997, operational levels remained relatively static at 4,478 operations.

To provide a reasonable estimate of annual aircraft operational levels at Holbrook Municipal Airport, the total annual operations recorded by Triple A Aviation were increased by 15 percent to account for aircraft operations conducted during periods when Triple A Aviation was closed. For purposes of determining future facility needs and forecasting future activity at Holbrook Municipal Airport, this Master Plan will consider the adjusted totals summarized in Table 1C.

TABLE 1C Historical Aircraft Operations		
Year	Triple A Aviation Recorded Operations	Adjusted Aircraft Operations
1994	3,770	4,300
1995	4,222	4,900
1996	4,518	5,200
1997	4,478	5,200

CARGO

Ameriflight, Express Air, and Air Express provide daily (weekday) cargo service to Holbrook Municipal Airport. Ameriflight utilizes Piper Lance aircraft. Express Air utilizes Piper Navajo aircraft, while Air Express utilizes Cessna 310 aircraft. Records of enplaned and deplaned cargo are not maintained by the City.

AIRPORT FACILITIES

Airport facilities can be functionally classified into two broad categories:

airside and landside. The airside category includes those facilities directly associated with aircraft operations. The landside category includes facilities necessary to provide a safe transition from either means (surface or air) of transportation. In addition, landside support facilities provide the necessary links to aid in the efficiency of the airport.

AIRSIDE FACILITIES

Airside facilities include runways, taxiways, airport lighting, and navigational aids. Airside facilities are identified on Exhibit 1A. Table 1D summarizes airside facility data.

Runways

There are two runways available for use at Holbrook Municipal Airport: Runway 3-21 and Runway 11-29. Runway 3-21 serves as the primary runway, is 6,698 feet long, 75 feet wide, and oriented in a northwest-southwest direction. The Runway 3 landing threshold is displaced 800 feet to provide approach clearance over trees in the approach surface. While not usable for landing to Runway 3, this 800 feet of pavement is available for departure to the northeast. Runway 3-21 is constructed of asphalt and has a single wheel load strength of 12,000 pounds. Single wheel loading refers to the design of the aircraft landing gear which has a single wheel on each main landing gear strut.

TABLE 1D
Airside Facility Data

	Runway 3-21	Runway 11-29
Runway Length (feet)	6,698	3,200
Runway Width (feet)	75	120
Runway Surface Condition	Asphalt/Aggregate Good	Dirt Fair
Runway Load Bearing Strength (pounds)	12,000	N/A
Runway Lighting	MIRL	None
Taxiway Lighting	MITL	None
Approach Aids		
Approach Slope Indicators	VASI (3) (21)	None
Runway End	REIL (3) (21)	None
Pavement Markings		
Runway	Visual	N/A
Taxiway, Taxilanes, Apron	Centerline, Tiedown	N/A
Traffic Pattern	left at 1000 feet AGL	left at 1000 feet AGL
Instrument Approach Procedures	None	None
Other Facilities	Segmented circle, lighted windcone	
MIRL-Medium Intensity Runway Lights MITL-Medium Intensity Taxiway Lights VASI-Visual Approach Slope Indicator REIL-Runway End Identifier Lights AGL-Above Ground Level Source: FAA 5010-1 Airport Master Record Form (1996), Airport Facility Directory, Southwest U.S., October 8, 1998		

Runway 11-29, oriented in a northwest-southwest direction, has a dirt surface approximately 3,200 feet long by 120 feet wide. The portion of Runway 11-29 extending between Runway 3-21 and Taxiway A is paved. Runway 11-29 serves as a crosswind runway. In this manner, the runway provides an alternate landing direction for small aircraft when wind flow is not closely aligned with Runway 3-21.

Taxiways

The taxiway system at Holbrook Municipal Airport is identified on **Exhibit 1A**. Taxiway A is the full length parallel taxiway providing access to both ends of Runway 3-21. Taxiway A is 35 feet wide and located 200 feet east of the Runway 3-21 centerline.

Taxiway A1, A2, A3, and A4 serve as runway entrance/exit taxiways and connect Runway 3-21 with Taxiway A. Taxiway A1 is 25 feet wide. Taxiway A2 is 35 feet wide. Taxiway A3 is 85 feet wide while Taxiway A4 is 60 feet wide.

Taxiway A5 extends between Taxiway A and the northeast portion of the aircraft parking apron, providing access to the T-hangar area. Taxiway A5 is 35 feet wide. Taxiway A6 extends between the aircraft parking apron and the Runway 3 displaced landing threshold. Taxiway A6 is 40 feet wide. Taxiway B is 40 feet wide and provides access from the aircraft parking apron to the Runway 3 departure threshold.

Helipad

A helipad is located south of Taxiway B for helicopter arrivals and departures. The helipad is constructed of concrete and measures 60 feet by 60 feet. The area surrounding the helipad is not paved and consists of a prime coat surface.

Airfield Lighting

Airfield lighting systems extend an airport's usefulness into periods of darkness and/or poor visibility. A variety of lighting systems are installed at the airport for this purpose. These lighting systems, categorized by function, are summarized as follows:

Identification Lighting: The location of an airport at night is universally indicated by a rotating beacon. A

rotating beacon projects two beams of light, one white and one green, 180 degrees apart. The rotating beacon at the airport is located on top of a steel tower on the east side of the airport.

Runway and Taxiway Lighting:

Runway and taxiway lighting utilizes light fixtures placed near the pavement edge to define the lateral limits of the pavement. This lighting is essential for safe operations during night and/or times of low visibility in order to maintain safe and efficient access to and from the runway and aircraft parking areas. Runway 3-21 is equipped with medium intensity runway lights (MIRL). All taxiways are equipped with medium intensity taxiway lights (MITL). The intensity of the runway and taxiway lighting can be controlled by pilots utilizing the radio transmitter in the aircraft.

Airfield Signs: Lighted airfield signs are installed at all taxiway and runway intersections. Airfield identification signs assist pilots in identifying their location on the airfield and direct them to their desired location.

Visual Approach Lighting: A visual approach slope indicator (VASI) is installed at each end of Runway 3-21. The VASI consists of a configuration of lights near the runway threshold which enable pilots to determine whether they are above or below the designed descent path to the runway.

Runway End Identification Lighting: Runway end identification lights (REILs) provide rapid and positive identification of the approach

end of the runway. The REIL system consists of two synchronized flashing lights, located laterally on each side of the runway threshold, facing the approaching aircraft. REILs are installed at each end of Runway 3-21.

Pavement Markings

Pavement markings aid in the movement of aircraft along airport surfaces and identify closed or hazardous areas on the airport. The basic markings on Runway 3-21 identify the runway centerline, designation, and aircraft holding positions. Taxiway and apron taxilane centerline markings are provided to assist aircraft using these airport surfaces. Pavement markings also identify aircraft parking positions.

Navigational Aids

Navigational aids are electronic devices that transmit radio frequencies which properly equipped aircraft and pilots translate into point-to-point guidance and position information. The types of electronic navigational aids available for aircraft flying to or from the airport include the very high frequency omnidirectional range (VOR) facility, nondirectional beacon (NDB), global positioning system (GPS), and Loran-C.

The VOR, in general, provides azimuth readings to pilots of properly equipped aircraft by transmitting a radio signal at every degree to provide 360 individual navigational courses. Frequently, distance measuring equipment (DME) is combined with a VOR facility (VOR-DME) to provide

distance as well as direction information to the pilot. Military tactical air navigation aids (TACANs) and civil VORs are commonly combined to form a VORTAC. A VORTAC provides distance and direction information to civil and military pilots. The Winslow VORTAC, located approximately 35 nautical miles northwest of Holbrook Municipal Airport, can be utilized by pilots flying to or from the airport.

The NDB transmits nondirectional radio signals whereby the pilot of a properly equipped aircraft can determine the bearing to or from the NDB facility and then "home" or track to or from the station. Pilots flying to or from Holbrook Municipal Airport can utilize the Show Low NDB located at Show Low Airport approximately 40 miles south.

Loran-C is a ground-based enroute navigational aid which utilizes a system of transmitters located in various locations across the continental United States. Loran-C varies from the VOR and NDB as pilots are not required to navigate using a specific facility (with the VOR, pilots must navigate to and from a specific VOR and NDB facility). With a properly equipped aircraft, pilots can navigate to any airport in the United States using Loran-C.

GPS is an additional navigational aid for pilots enroute to the airport. GPS was initially developed by the United States Department of Defense for military navigation around the world. Increasingly over the last few years, GPS has been utilized more in civilian

aircraft. GPS uses satellites placed in orbit around the globe to transmit electronic signals which properly equipped aircraft use to determine altitude, speed, and navigational information. GPS is similar to Loran-C as pilots can directly navigate to any airport in the country and are not required to navigate using a specific navigational facility.

The FAA is proceeding with a program to gradually replace all traditional enroute navigational aids with GPS over the next decade. The FAA phase out schedule for traditional navigational aids includes VORs and NDBs between 2000 and 2005, and Loran-C in 2008.

Instrument Approach Procedures

Instrument approach procedures are a series of predetermined maneuvers established by the FAA using electronic navigational aids that assist pilots in locating and landing at an airport during low visibility and cloud ceiling conditions. There are currently no instrument approach procedures published for Holbrook Municipal Airport. Therefore, the airport is essentially closed to arrivals when visual flight can no longer be conducted.

LANDSIDE FACILITIES

Landside facilities include aircraft storage facilities, aircraft parking aprons, and support facilities such as fuel storage and aircraft rescue and fire fighting facilities. Landside facilities are identified on **Exhibit 1B**.

Aircraft Parking Apron

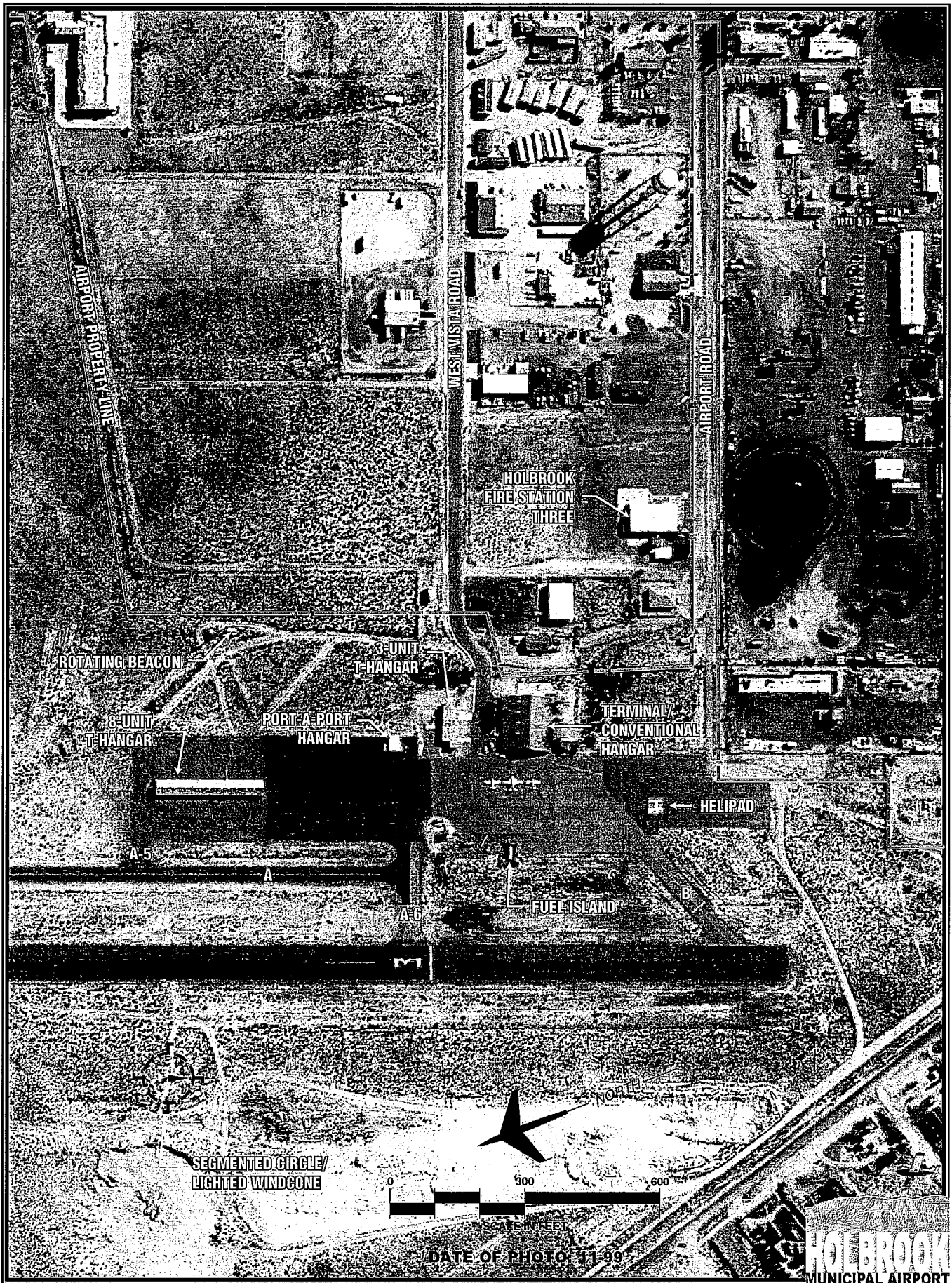
The aircraft apron at Holbrook Municipal Airport is constructed of asphalt and encompasses approximately 27,200 square yards, providing space for aircraft movement and local and transient aircraft tiedown. Approximately 40 aircraft tiedowns are available for aircraft parking. Five floodlights along the east side of the apron enhances operations at night and airfield security.

T-hangars

There are a total of 11 enclosed T-Hangars units at Holbrook Municipal Airport, totaling approximately 11,200 square feet of storage space in two separate structures. An 8,200 square foot privately-owned T-hangar containing eight units is located on the north end of the aircraft parking apron area. A 2,900 square-foot City-owned T-hangar containing three units is located north of the terminal building on the east side of the aircraft parking apron. A privately owned port-a-port hangar is located in an aircraft tiedown location on the east side of the aircraft parking apron.

Terminal Building And Conventional Hangar

A 13,200 square-foot hangar/terminal building is located along the south side of the aircraft parking apron west of West Vista Road. Built in the 1940's, this building includes approximately 7,500 square feet of hangar space with



the remainder of the building providing space for a pilot's lounge, restrooms, and offices for Triple A Aviation.

Automobile Parking

There are approximately four parking spaces located next to the terminal building, one of which is a designated disabled parking space. There are no other designated parking areas on the airport.

Fuel Storage

The existing fuel storage facilities at the airport are owned by the City of Holbrook and operated by Triple A Aviation. Fuel storage for 100LL Avgas totals 11,750 gallons in a single tank located along the western edge of the apron. Fuel is dispersed through a stationary fuel island co-located with the storage tank.

Utilities

Currently, electrical, natural gas, and water services are available at the airport. Electrical service is provided by Arizona Public Service (APS). Citizen Utilities Company provides natural gas service, and Citizens Telecom provides telephone service. Water service is provided by the City of Holbrook.

The terminal building is connected to a septic tank. A sewer line was extended to the airport when West Vista Road was constructed and the City plans to eventually connect the terminal to this sewer line.

Perimeter Fencing

The entire airport perimeter is presently fenced with a combination of chainlink and barbwire fence. Much of the area south of the aircraft parking apron is equipped with chain link fencing, while the remaining portions of the airport property line are equipped with five-strand barbwire fencing. A manual gate is located at Airport Road.

Aircraft Rescue and Firefighting

Fire Station Three is located southeast of the airport, north of Airport Road. It is available for response to aircraft and airport facility emergencies.

General Aviation Services

Triple A Aviation provides maintenance and fuel services at Holbrook Municipal Airport. In addition, Triple A Aviation does not have rental aircraft available but can acquire rental aircraft from Flagstaff.

VICINITY AIRSPACE, AIR TRAFFIC CONTROL, AND AIRPORTS

VICINITY AIRSPACE

To ensure a safe and efficient airspace environment for all aspects of aviation, the FAA has established an airspace structure that regulates and establishes procedures for aircraft using the National Airspace System. The U.S. airspace structure provides for two

basic categories of airspace, controlled and uncontrolled, and identifies them as Classes A, B, C, D, E, and G.

Class A airspace is controlled airspace and includes all airspace from 18,000 feet mean sea level (MSL) to Flight Level 600 (approximately 60,000 feet MSL). Class B airspace is controlled airspace surrounding high capacity commercial service airports (i.e. Phoenix Sky Harbor International Airport). Class C airspace is controlled airspace surrounding lower activity commercial service (i.e., Tucson International Airport) and some military airports. Class D airspace is controlled airspace surrounding airports with an airport traffic control tower. All aircraft operating within Class A, B, C, and D airspace must be in contact with the air traffic control facility responsible for that particular airspace. Class E is controlled airspace that encompasses all instrument approach procedures and low altitude federal airways. Only aircraft conducting instrument flights are required to be in contact with air traffic control when operating within Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio communications with air traffic control facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist. Class G airspace is uncontrolled airspace that does not require contact with an air traffic control facility.

Airspace in the vicinity of Holbrook Municipal Airport is depicted on **Exhibit 1C**. The airspace surrounding Holbrook Municipal Airport extending from the surface to 14,500 feet MSL is

Class G airspace. Approximately three nautical miles north and south of the airport is Class E airspace encompassing low altitude federal (Victor) airways. Victor airways are corridors of airspace eight miles wide that extend upward from 1,200 feet (AGL) to 18,000 (MSL) and extend between VOR navigational facilities. The Victor airways in the Holbrook and Winslow area emanate from the Winslow VORTAC and are identified in **Exhibit 1C**.

While not considered part of the U.S. Airspace Structure, the boundaries of National Park Service Areas, U.S. Fish and Wildlife Service areas, and U.S. Forest Wilderness and Primitive areas are noted on aeronautical charts. While aircraft operations are not specifically restricted over these areas, aircraft are requested to maintain a minimum altitude of 2,000 feet above the surface. **Exhibit 1C** depicts the boundaries of the Petrified Forest National Park near Holbrook Municipal Airport.

Located approximately 35 nautical miles northwest is an area of special-use airspace designated as a Military Operations Area (MOA). MOA's define areas of high level military activity and are intended to segregate military and civilian aircraft. While civilian operations are not restricted within a MOA, civilian aircraft are cautioned to be alert for military aircraft when operating in the MOA. Military operations within the Sunny MOA are normally conducted at an altitude of 12,000 feet mean sea level and hours of operations are given by a notice to airman (NOTAM) 24 hours in advance. Military training routes in the vicinity



LEGEND

- Airport with hard-surfaced runways
1500' to 8069' in length
- VORTAC
- Non-Directional Radiobeacon (NDB)
- Compass Rose
- Military Operations Area (MOA)

- Class E Airspace
- Class E Airspace with floor 700'
above surface
- Class E Airspace with floor 1200' or
greater above surface that abuts
Class G Airspace
- Victor Airways
- Military Training Routes

Source: Phoenix Sectional Chart,
US Department of
Commerce, National
Oceanic and Atmospheric
Administration



MUNICIPAL AIRPORT

Exhibit 1C
AREA AIRSPACE AND
REGIONAL AIRPORTS

of Holbrook Municipal Airport are identified on **Exhibit 1C**. Military jets travel on these routes at altitudes above 10,000 feet and speeds in excess of 250 knots.

AIR TRAFFIC CONTROL

Holbrook Municipal Airport does not have an airport traffic control tower and is in uncontrolled airspace, therefore, no formal terminal air traffic control services are available. Aircraft operating in the vicinity of the airport are not required to file any type of flight plan or to contact any air traffic control facility unless they are entering airspace where contact is mandatory. Air traffic advisories and certain weather information can be obtained using the airport unicom (operated by Triple A Aviation). Enroute air traffic control services are provided through the Albuquerque Air Route Traffic Control Facility (ARTCC), which controls aircraft in a large multi-state area.

LOCAL OPERATING PROCEDURES

Holbrook Municipal Airport is situated at 5,257 feet (MSL). The traffic pattern altitude for all aircraft at the airport is 1,000 feet above the airfield elevation (6,257 feet MSL). All runways utilize a left hand traffic pattern. In this manner, aircraft approach the desired runway end following a series of left-hand turns.

Flights in and out of Holbrook Municipal Airport are conducted under

visual flight rules (VFR). VFR conditions exist at Holbrook Municipal Airport when the visibility is at least one statute mile and aircraft can maintain clear of clouds. At 1,200 feet AGL, aircraft must remain 500 feet below, 1,000 feet above, and 2,000 feet horizontal of any clouds.

Runway use is dictated by wind conditions. Ideally, it is desirable for aircraft to land directly into the wind. Prevailing wind flow is from the west-southwest leading to a greater use of Runway 21. Certain wind conditions may be too extreme for smaller aircraft to land safely on the primary Runway 3-21. This normally dictates using the crosswind Runway 11-29.

COMMUNITY PROFILE

The community profile includes background information regarding the City of Holbrook and the regional area. This includes information regarding the airport's role in regional, state, and national aviation systems, surface transportation, area airports, climate, population, employment, and local economic growth.

REGIONAL SETTING

The City of Holbrook is located in the east-central portion of Navajo County and serves as the county seat. The County is divided into two distinct parts, the north being arid and desert-like with empty mesas and smaller plateaus. The southern part is a rugged mountain area, heavily wooded with pinon juniper and ponderosa pine. The

City of Holbrook is situated in the high plateau country, on the banks of the Little Colorado River. Winslow and Snowflake lie to the west and south respectively. **Exhibit 1D** depicts the airport in its local and regional setting.

REGIONAL ACCESS AND TRANSPORTATION

Regionally, the airport can be accessed from Interstate Highway 40, State Routes 180, 77, and 377. Interstate Highway 40 is located approximately one mile from the airport. Interstate Highway 40 is a major east-west truck and car route bisecting much of the southwestern United States. Interstate Highway 40 provides access to Winslow and Flagstaff to the west, and Gallup and Albuquerque, New Mexico to the east. State Route 180 is located approximately three miles south of the airport and provides access to the Petrified Forest National Park to the east. State Route 77 provides access to Snowflake and Show Low to the south, and Indian Wells and White Cone to the north. State Route 377 is located approximately five miles south of the airport and extends between State Route 77 and State Route 277.

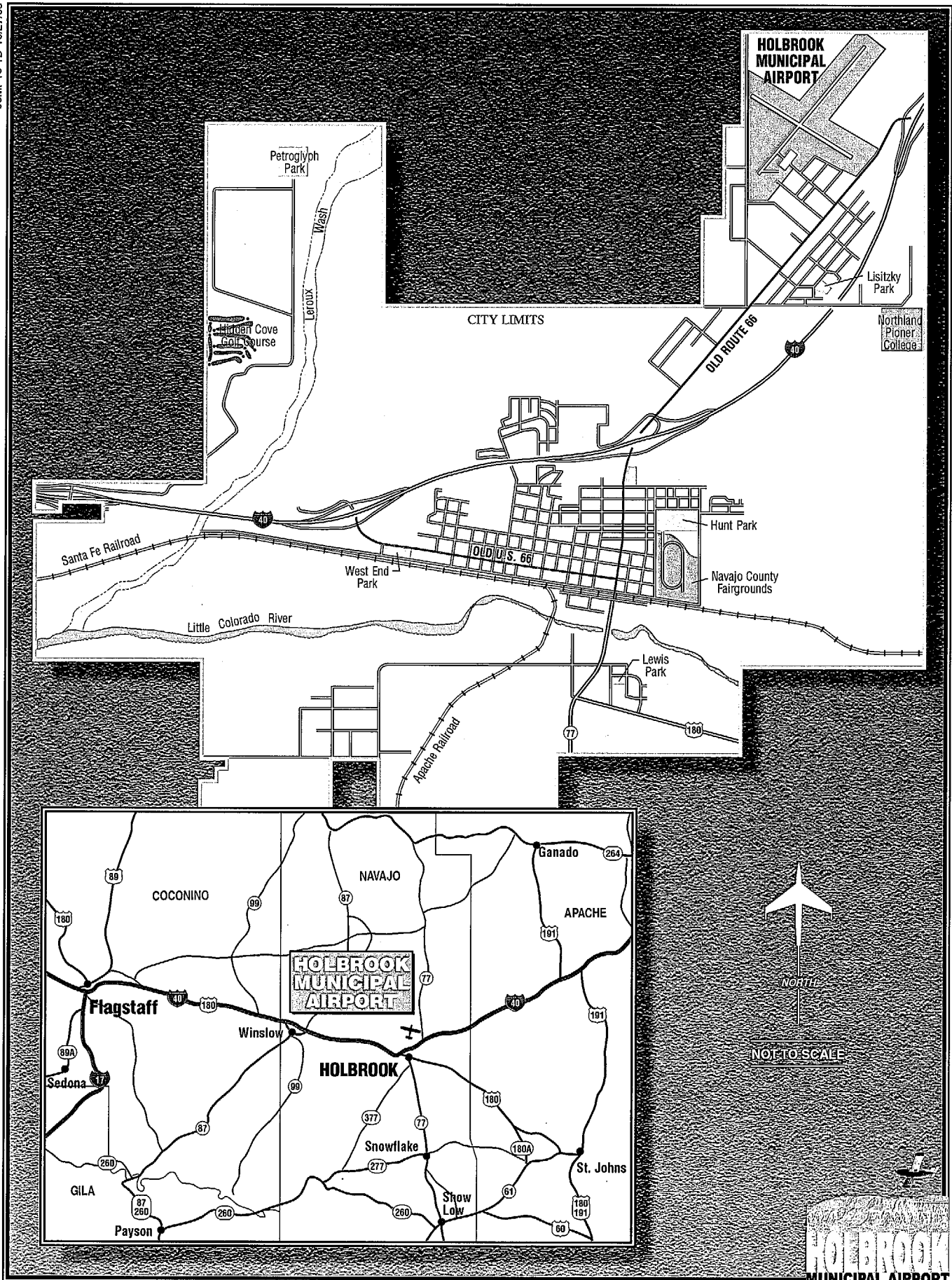
There is no commuter or long distance rail service existing in Holbrook, however, Burlington Northern/Santa Fe and Apache Railway both maintain active freight lines in Holbrook. Taxi and bus services are available in the area as well.

REGIONAL AIRPORTS

A review of the airports within 30 nautical miles of Holbrook Municipal Airport has been made to identify and distinguish the type of air service provided in the area surrounding the airport. Public use airports within 30 nautical miles of the airport were previously identified on **Exhibit 1C**. Information pertaining to each airport was obtained from FAA *Form 5010-1, Airport Master Record*.

Winslow-Lindbergh Regional Airport is located approximately 29 nautical miles west-northwest of Holbrook Municipal Airport and is owned and operated by the City of Winslow. Two asphalt runways are available for use (the longest at 7,498 feet). Runway 11 has a published instrument approach and is equipped with VASIs and REILs at each end of the runway. The airport accommodates approximately 27,600 operations annually. Approximately 15 aircraft are based at Winslow-Lindbergh Regional Airport and a full-range of general aviation services are available.

Taylor Airport is located approximately 27 nautical miles south of Holbrook Municipal Airport and is owned and operated by the Town of Taylor. A single asphalt runway (7,200 feet long) is available for use and PAPIs are available at each runway end. Taylor Airport accommodates approximately 4,800 operations a year. There are approximately 18 based aircraft at the airport. A full-range of general aviation services are available at Taylor Airport.



HOLBROOK MUNICIPAL AIRPORT
Exhibit 1D
VICINITY MAP

THE AIRPORT'S SYSTEM ROLE

Airport planning exists on many levels: local, regional, state, and national. Each level has a different emphasis and purpose. This master plan is the primary local airport planning document.

At the state level, the airport is included in the *Arizona State Aviation System Plan (SASP)*. The purpose of the *SASP* is to ensure that the State has an adequate and efficient system of airports to serve its aviation needs well into the 21st century. The *SASP* defines the specific role of each airport in the State's aviation system and establishes funding needs. Holbrook Municipal Airport is one of 112 airports in the state's system plan. Through the State's Continuous Aviation System Planning Process (CASPP), the *SASP* is updated every five years. The most recent update to the *SASP* is the 1995 *Arizona State Aviation Needs Study (SANS)*. The purpose of the *SANS* is to provide policy guidelines that promote and maintain a safe aviation system in the State, assess the State's airports capital improvement needs, and identify resources and strategies to implement the plan. The 1995 *SANS* included all public and private airports and heliports in Arizona which are open to the public, including American Indian and recreational airports.

At the national level, the airport is included in the *National Plan of Integrated Airport Systems (NPIAS)*. The *NPIAS* includes a total of 3,660 airports (both existing and proposed) which identifies airports, together with the airport development necessary to

anticipate and meet the present and future requirements in support of civil needs. An airport must be included in the *NPIAS* to be eligible for federal funding assistance. Holbrook Municipal Airport is one of 46 general aviation airports in Arizona included in the *NPIAS*.

PREVIOUS MASTER PLANS

In 1979 and 1989, the airport completed Airport Master Plans to outline the direction for the continued development and expansion of Holbrook Municipal Airport. The 1979 *Holbrook Municipal Airport Master Plan* principal recommendations included constructing a parallel taxiway to Runway 3-21, extending runway 3-21 to 6,700 feet, expanding the apron area for T-hangar construction, and constructing a paved crosswind runway. With the exception of the paved crosswind runway, the principal recommendations of the 1979 Master Plan have been completed.

The 1989 *Holbrook Municipal Airport Master Plan* recommended several items. Those completed include installing VASIs and REILs to Runway 3-21, constructing a helipad, and various pavement preservation projects. Other recommendations yet to be completed include the construction of a terminal building, upgrading instrument approach capability, and constructing a paved crosswind runway.

CLIMATE

According to the Arizona Department of Commerce, the local climate for

Holbrook is typical for high desert conditions. The normal daily minimum ranges from 18 degrees in January to 60 degrees in July. Maximum daily temperatures range from 47 degrees in January to 95 degrees in July. The regional area can expect approximately seven inches of rainfall annually.

POPULATION

Historical resident population estimates for the City of Holbrook are summarized in **Table 1E**. As shown in the table, the population of the City of Holbrook has fluctuated from a high of 5,785 in 1980 to a low of 4,686 in 1990. After declining during the 1980's, the City of Holbrook population has rebounded since falling to a 27 year low in 1990 (increasing at an average annual rate of 2.6 percent between 1990 and 1997).

TABLE 1E Historical Population City of Holbrook	
Year	Population
1970	4,759
1980	5,785
1990	4,686
1996	5,385
1997	5,625
Source: City of Holbrook General Plan (1970-1996). Arizona Department of Economic Security, Population Statistics Unit (1997).	

EMPLOYMENT

Table 1F summarizes historical total employment for the City of Holbrook

from 1990 to 1997. Overall, the total employment for the City of Holbrook increased between 1990 and 1997 by 213 (an average annual growth rate of 1.4 percent), after declining slightly in 1997.

TABLE 1F Historical Total Employment City of Holbrook	
Year	Employed
1990	2,154
1996	2,399
1997	2,367
Average Annual Growth Rate	1.4%
Source: Arizona Department of Economic Security	

LOCAL ECONOMIC GROWTH INDICATORS

Table 1G summarizes local economic growth indicators compiled by the Arizona Department of Commerce for the City of Holbrook. These growth indicators signify the economic expansion and development occurring in the City of Holbrook. As shown in the table, the City of Holbrook has enjoyed growth in taxable sales, postal receipts, and public school enrollment during the 1990's. Taxable sales and postal receipts provide an indication of the degree of commerce conducted in the community, while new building permits and net assessed valuation provide an indication of the growth in commercial and residential development. School enrollment can corroborate population growth.

TABLE 1G
Holbrook Economic Growth Indicators

Year	Taxable Sales(\$) ¹	Postal Receipts(\$)	New Building Permits	Public School Enrollment	Net Assessed Valuation(\$) ¹
1990	54.035	468,594	48	1,708	15.125
1996	72.182	698,493	N/A	2,036	16.654
1997	74.096	682,847	6	2,145	16.608

Source: Arizona Department of Commerce

¹in millions

SUMMARY

The information discussed in this inventory chapter provides a foundation upon which the remaining elements of the planning process will be constructed. This information will provide guidance, along with additional analysis and data collection, for the development of forecasts of aviation demand and facility requirements.

DOCUMENT SOURCES

A variety of different documents were referenced in the inventory process. The following listing reflects a partial compilation of these sources. The listing does not include the data provided by Holbrook Municipal Airport, or drawings which were referenced for information. An on-site inventory and interviews with airport staff and tenants contributed to the development of the inventory effort.

National Plan of Integrated Airport System (NPIAS), U.S. Department of Transportation, Federal Aviation Administration, 1993-1997.

Phoenix Sectional Aeronautical Chart, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, 61st Edition, September 10, 1998 Edition.

U.S. Terminal Procedures, Southwest Volume 1 of 2, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, October 8, 1998 Edition.

Airport/Facility Directory, Southwest U.S., U.S. Department of Commerce, National Oceanic and Atmospheric Administration, October 8, 1998 Edition.

City of Holbrook General Plan (1997-2010), City of Holbrook Planning and Zoning Department.

A number of internet sites were accessed and contributed information for the inventory effort. These include:

Arizona Department of Commerce:

<http://www.state.az.us/commerce>

FAA 5010 Data, Area Airports

<http://www.airnav.com>